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CLAIMS:

What is claimed is:

- 1 1. A method in a data processing system for specifying
2 a cache policy for caching pages which include dynamic
3 content, said method comprising the steps of:
4 permitting a user to request one of said pages to be
5 displayed, said one of said pages including a plurality
6 of fragments;
7 executing an application which includes a plurality
8 of servlets, each one of said plurality of servlets being
9 executed to present a different one of said plurality of
10 fragments, each one of said plurality of servlets being
11 unchanged by said caching policy; and
12 processing caching of said one of said pages
13 separately from said application.
- 1 2. The method according to claim 1, further comprising
2 the steps of processing caching of each of said plurality
3 of fragments separately from said application.
- 1 3. The method according to claim 1, wherein the step of
2 processing caching further comprises the steps of:
3 responding to internal cache requests; and
4 responding to external cache requests.

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1 4. The method according to claim 1, further comprising
2 the step of processing caching of said one of said pages
3 within an application server included within said
4 computer system.

1 5. The method according to claim 4, further comprising
2 the steps of:
3 responding to internal cache requests, said internal
4 cache requests being generated within said application
5 server; and
6 responding to external cache requests, said external
7 cache requests being generated outside said application
8 server.

1 6. The method according to claim 1, wherein the step of
2 processing caching of said one of said pages further
3 comprises the steps of:
4 receiving a request to display one of said plurality
5 of fragments;
6 determining one of plurality of servlets associated
7 with said one of said plurality of fragments; and
8 executing said one of said plurality of servlets,
9 wherein said execution of said one of said plurality of
10 servlets generates a displayable output.

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1 7. The method according to claim 6, further comprising
2 the steps of:

3 in response to a first request to display said one
4 of said plurality of fragments, creating a cache entry
5 including said output;

6 creating a cache entry identifier for identifying
7 said cache entry utilizing a user identifier which
8 identifies said user and caching options specified for
9 said one of said plurality of servlets.

1 8. The method according to claim 7, further comprising
2 the steps of:

3 creating said one of said plurality of servlets;
4 specifying said cache options for said one of said
5 plurality of servlets; and

6 creating a servlet element for said servlet
7 utilizing a servlet identifier and an indication of said
8 specified cache options, wherein said servlet element is
9 associated with said servlet.

1 9. The method according to claim 8, further comprising
2 the steps of:

3 storing said servlet; and

4 storing said specification of said servlet options
5 with said servlet.

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1 10. The method according to claim 8, further comprising
2 the steps of:
3 receiving a request to display said servlet element;
4 determining whether any cache entry is identified by
5 said cache identifier;
6 in response to a determination that no cache entry
7 is identified by said cache identifier:
8 retrieving said servlet associated with said
9 servlet element;
10 providing said user identifier to said servlet;
11 executing said servlet utilizing said user
12 identifier generating an output;
13 storing said output as a cache entry;
14 identifying said cache entry utilizing said
15 cache identifier; and
16 returning said cache entry to said user,
17 wherein said output is displayed.

1 11. The method according to claim 8, further comprising
2 the steps of:
3 receiving a request to display said servlet element;
4 determining whether any cache entry is identified by
5 said cache identifier;
6 in response to a determination that a cache entry
7 exists which is identified by said cache identifier,
8 returning said cache entry to said user, wherein said
9 output is displayed.

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1 12. The method according to claim 6, further comprising
2 the step of outputting said cache entry, wherein said one
3 of said plurality of fragments is displayed.

1 13. The method according to claim 6, further comprising
2 the step of in response to subsequent requests to display
3 said one of said plurality of fragments, retrieving said
4 cache entry utilizing said cache identifier.

1 14. The method according to claim 13, further comprising
2 the step of outputting said cache entry, wherein said one
3 of said plurality of fragments is displayed.

1 15. A data processing system for specifying a cache
2 policy for caching pages which include dynamic content,
3 comprising:

4 said data processing system for executing an
5 application which includes a plurality of servlets, each
6 one of said plurality of servlets being executed to
7 present a different one of a plurality of fragments
8 included within a page, each one of said plurality of
9 servlets being unchanged by said caching policy; and

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10 said data processing system for processing caching
11 of said one of said pages separately from said
12 application.

1 16. The system according to claim 15, further comprising
2 said data processing system for processing caching of
3 each of said plurality of fragments separately from said
4 application.

1 17. The system according to claim 15, further
2 comprising:
3 said data processing system for responding to
4 internal cache requests; and
5 said data processing system for responding to
6 external cache requests.

1 18. The system according to claim 15, further comprising
2 said data processing system for processing caching of
3 said one of said pages within an application server
4 included within said computer system.

1 19. The system according to claim 18, further
2 comprising:

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3 said data processing system for responding to
4 internal cache requests, said internal cache requests
5 being generated within said application server; and
6 said data processing system for responding to
7 external cache requests, said external cache requests
8 being generated outside said application server.

1 20. The system according to claim 15, further
2 comprising:

3 said data processing system for receiving a request
4 to display one of said plurality of fragments;

5 said data processing system for determining one of
6 plurality of servlets associated with said one of said
7 plurality of fragments; and

8 said data processing system for executing said one
9 of said plurality of servlets, wherein said execution of
10 said one of said plurality of servlets generates a
11 displayable output.

1 21. The system according to claim 20, further
2 comprising:

3 said data processing system for in response to a
4 first request to display said one of said plurality of
5 fragments, creating a cache entry including said output;

6 said data processing system for creating a cache
7 entry identifier for identifying said cache entry

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8 utilizing a user identifier which identifies said user
9 and caching options specified for said one of said
10 plurality of servlets.

1 22. The system according to claim 21, further
2 comprising:
3 said data processing system for creating said one of
4 said plurality of servlets;
5 said data processing system for specifying said
6 cache options for said one of said plurality of servlets;
7 and
8 said data processing system for creating a servlet
9 element for said servlet utilizing a servlet identifier
10 and an indication of said specified cache options,
11 wherein said servlet element is associated with said
12 servlet.

1 23. The system according to claim 22, further
2 comprising:
3 said data processing system for storing said
4 servlet; and
5 said data processing system for storing said
6 specification of said servlet options with said servlet.

1 24. The system according to claim 22, further
2 comprising:
3 said data processing system for receiving a request
4 to display said servlet element;

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5 said data processing system for determining whether
6 any cache entry is identified by said cache identifier;
7 said data processing system in response to a
8 determination that no cache entry is identified by said
9 cache identifier:

10 for retrieving said servlet associated with
11 said servlet element;
12 for providing said user identifier to said
13 servlet;
14 for executing said servlet utilizing said user
15 identifier generating an output;
16 for storing said output as a cache entry;
17 for identifying said cache entry utilizing said
18 cache identifier; and
19 for returning said cache entry to said user,
20 wherein said output is displayed.

1 25. The system according to claim 22, further
2 comprising:

3 said data processing system for receiving a request
4 to display said servlet element;
5 determining whether any cache entry is identified by
6 said cache identifier;
7 said data processing system for in response to a
8 determination that a cache entry exists which is
9 identified by said cache identifier, returning said cache
10 entry to said user, wherein said output is displayed.

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1 26. The system according to claim 20, further comprising
2 said data processing system for outputting said cache
3 entry, wherein said one of said plurality of fragments is
4 displayed.

1 27. The system according to claim 20, further comprising
2 said data processing system for in response to subsequent
3 requests to display said one of said plurality of
4 fragments, retrieving said cache entry utilizing said
5 cache identifier.

1 28. The system according to claim 27, further comprising
2 said data processing system for outputting said cache
3 entry, wherein said one of said plurality of fragments is
4 displayed.

1 29. A computer program product in a data processing
2 system for specifying a cache policy for caching pages
3 which include dynamic content, said computer program
4 product comprising:

5 instruction means for permitting a user to request
6 one of said pages to be displayed, said one of said pages
7 including a plurality of fragments;

8 instruction means for executing an application which
9 includes a plurality of servlets, each one of said
10 plurality of servlets being executed to present a
11 different one of said plurality of fragments, each one of

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12 said plurality of servlets being unchanged by said
13 caching policy; and
14 instruction means for processing caching of said one
15 of said pages separately from said application.

1 30. The product according to claim 29, further
2 comprising instruction means for processing caching of
3 each of said plurality of fragments separately from said
4 application.

1 31. The product according to claim 29, wherein said
2 instruction means for processing caching further
3 comprises:
4 instruction means for responding to internal cache
5 requests; and
6 instruction means for responding to external cache
7 requests.

1 32. The product according to claim 29, further
2 comprising instruction means for processing caching of
3 said one of said pages within an application server
4 included within said computer system.

1 33. The product according to claim 32, further
2 comprising:
3 instruction means for responding to internal cache
4 requests, said internal cache requests being generated
5 within said application server; and

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6 instruction means for responding to external cache
7 requests, said external cache requests being generated
8 outside said application server.

1 34. The product according to claim 29, wherein said
2 instruction means for processing caching of said one of
3 said pages further comprises:

4 instruction means for receiving a request to display
5 one of said plurality of fragments;

6 instruction means for determining one of plurality
7 of servlets associated with said one of said plurality of
8 fragments; and

9 instruction means for executing said one of said
10 plurality of servlets, wherein said execution of said one
11 of said plurality of servlets generates a displayable
12 output.

1 35. The product according to claim 34, further
2 comprising:

3 instruction means for in response to a first request
4 to display said one of said plurality of fragments,
5 creating a cache entry including said output;

6 instruction means for creating a cache entry
7 identifier for identifying said cache entry utilizing a
8 user identifier which identifies said user and caching
9 options specified for said one of said plurality of
10 servlets.

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1 36 The product according to claim 35, further
2 comprising:
3 instruction means for creating said one of said
4 plurality of servlets;
5 instruction means for specifying said cache options
6 for said one of said plurality of servlets; and
7 instruction means for creating a servlet element for
8 said servlet utilizing a servlet identifier and an
9 indication of said specified cache options, wherein said
10 servlet element is associated with said servlet.

1 37. The product according to claim 36, further
2 comprising:
3 instruction means for storing said servlet; and
4 instruction means for storing said specification of
5 said servlet options with said servlet.

1 38. The product according to claim 36, further
2 comprising:
3 instruction means for receiving a request to display
4 said servlet element;
5 instruction means for determining whether any cache
6 entry is identified by said cache identifier;
7 instruction means in response to a determination
8 that no cache entry is identified by said cache
9 identifier:
10 for retrieving said servlet associated with
11 said servlet element;

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12 for providing said user identifier to said
13 servlet;
14 for executing said servlet utilizing said user
15 identifier generating an output;
16 for storing said output as a cache entry;
17 for identifying said cache entry utilizing said
18 cache identifier; and
19 for returning said cache entry to said user,
20 wherein said output is displayed.

1 39. The product according to claim 36, further
2 comprising:
3 instruction means for receiving a request to display
4 said servlet element;
5 instruction means for determining whether any cache
6 entry is identified by said cache identifier;
7 instruction means for in response to a determination
8 that a cache entry exists which is identified by said
9 cache identifier, returning said cache entry to said
10 user, wherein said output is displayed.

1 40. The product according to claim 34, further
2 comprising instruction means for outputting said cache
3 entry, wherein said one of said plurality of fragments is
4 displayed.

1 41. The product according to claim 34, further
2 comprising instruction means for in response to

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3 subsequent requests to display said one of said plurality
4 of fragments, retrieving said cache entry utilizing said
5 cache identifier.

1 42. The product according to claim 41, further
2 comprising instruction means for outputting said cache
3 entry, wherein said one of said plurality of fragments is
4 displayed.

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